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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,711	02/08/2002	Benitius M. Handjojo	31075-18	4005

7590 09/01/2004

Woodard, Emhardt, Naughton, Moriarty and McNett  
Bank one Center/Tower  
111 Monument Circle, Suite 3700  
Indianapolis, IN 46204-5137

EXAMINER

KOSTAK, VICTOR R

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/071,711

Applicant(s)

HANDJOJO ET AL.

Examiner

Victor R. Kostak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-33 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**BEST AVAILABLE COPY****Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 5 and 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by De Haan et al. (#6,034,734).

The television receiver of De Haan (noting Fig. 1) carries out interlace-to-progressive scan conversion (e.g. col. 2 lines 56-57). The arrangement includes scan convertor 1 serves as a prefilter (col. 10 lines 50-53), a motion estimator 13 having a prefiltered signal at an input and a motion-corrected signal D as an output, and an adaptive filter comprising elements 3, 5 and 7 having the prefiltered signal and the motion-corrected signal as inputs (as shown), thereby meeting claim 1.

As for claim 4, a 3-D recursive search is done by the motion estimator (e.g. col. 4 lines 52-56).

As for claim 5, the motion estimator also provides a correction by way of updating (col. 4 lines 56+).

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Regarding claim 7, the adaptive filtering carries out median filtering (e.g. col. 4 equation (2)).

As for claim 8, the filtering is applied to video lines, and median filtering by definition which involves a type of averaging.

As for claims 9 and 10, the filtering (controlled by the 3-D motion estimation) involves adaptive and time recursive filtering (e.g. col. 11 lines 24+).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Haan et al., '734.

De Haan points out that the initial scan conversion filtering (which involves interpolated data as output: col. 10 lines 50-53) can involve "*any algorithm*" (col. 11 line 64 – col. 12 line 1), and which involves the spatial (not temporal) domain. In view of this explicit allowance, it would have been obvious to apply any suitable filtering that results in interpolated values, such as by well known averaging, which provides intermediate values as a function of the input values.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over De Haan et al. '734 in view of De Haan #6,278,736.

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It would also have been obvious to provide block erosion filtering to ensure that the optimal motion data is used in the de-interlacing process (the ulterior purpose being the presentation of imagery in the best form), as is taught by De Haan in another of his related patents '736, (col. 11 lines 10-17), and directed to de-interlacing (col. 15 lines 25-27).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Claims 11-33 appear allowable over the prior art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is 703 305-4374. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9306 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.



Victor R. Kostak  
Primary Examiner  
Art Unit 2614

VRK

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